



Arlington's Natural Treasures and Protection Efforts

By Alonso Abugattas

Arlington's Natural Resources By The Numbers

- 26 square miles
- 225,200 population and growing
- 40% impervious surfaces
- 50% loss of surface streams
- 360-mile stormwater system
- 18% general open space
- 4.4% remaining natural lands
- High degree of soil disturbance
- Widespread invasive plants
- 30% of native plants locally rare
- 49% of mammals extirpated or undocumented
- 75% of snakes/salamanders extirpated, undocumented or rare

Arlington is home to **24** kinds of Mammals, **30** Damselfly/Dragonflies, **33** Reptile/Amphibians, **55** Butterflies, **93** Moths, **197** Birds and well over **600** native plants.

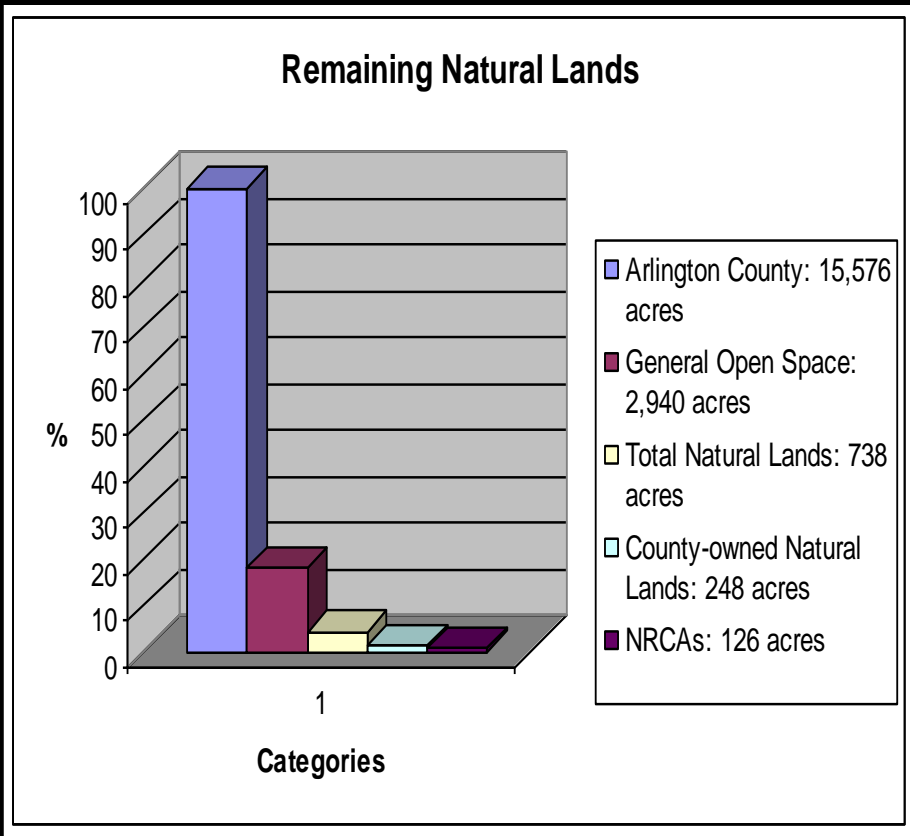
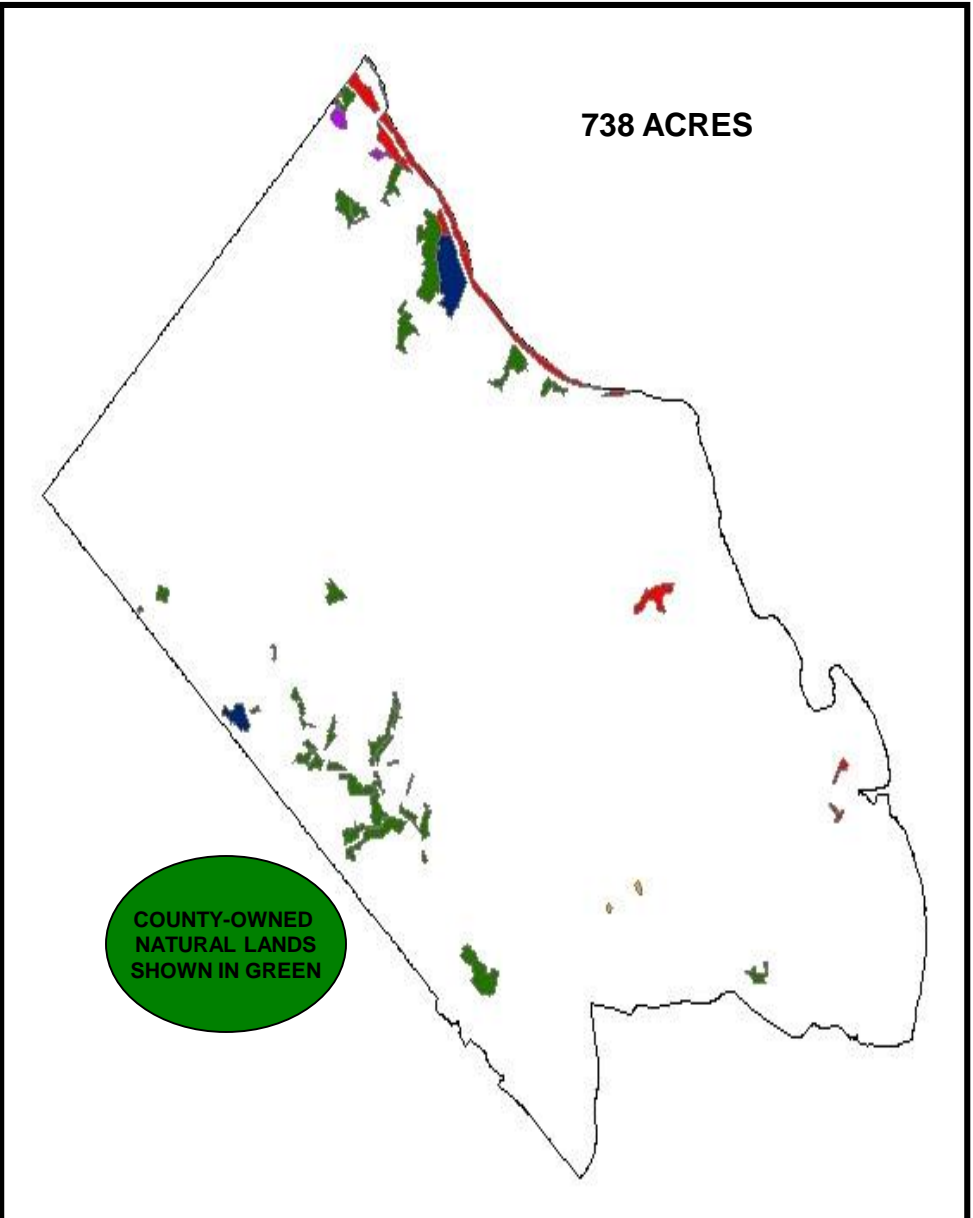
13 state rare listed plants

One globally rare and several state rare communities

Numerous plants and wildlife that had re-appeared recently, including ravens, striped skunks, river otters, coyotes, bobcats, gray fox, yellow-crowned night-herons, Mississippi kites, wild turkey and little wood satyr butterflies

Arlington County **strategically manages** its Public Spaces, Natural Resource and Urban Forest with dedicated plans and policies.

ARLINGTON'S REMAINING NATURAL LANDS





Natural Resources Management Unit

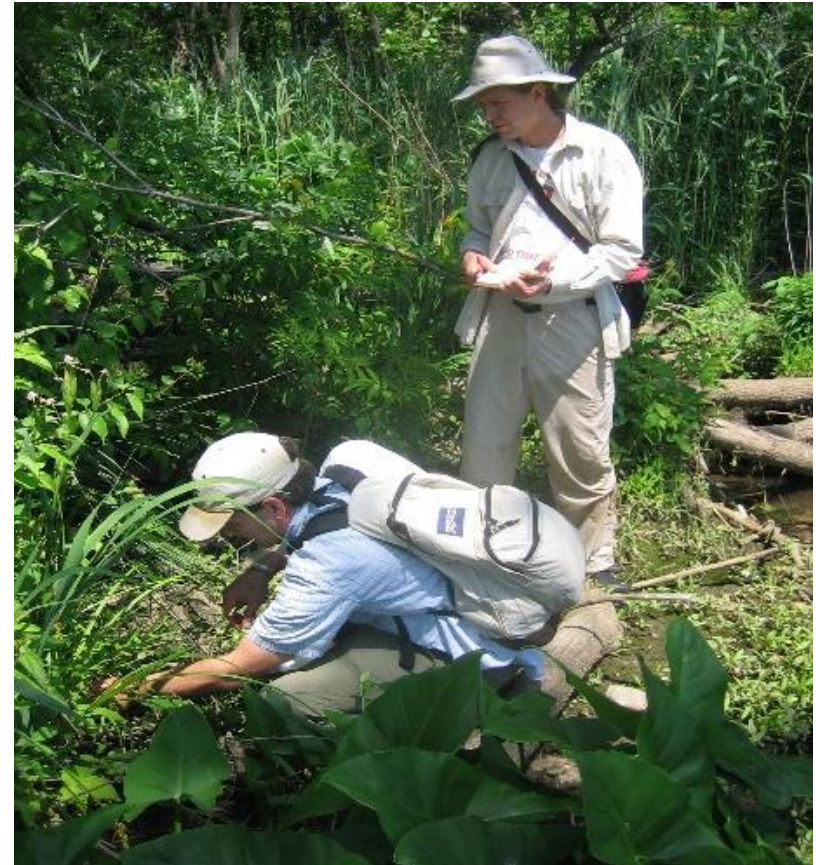
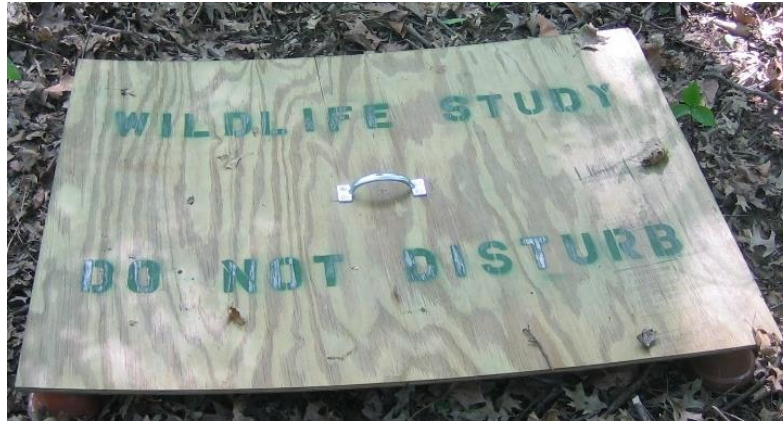
Protection

Restoration


Invasive Program

Management

Engagement



Inventory and Assessment
Natural Heritage Resource Inventory



Protection and Planning



- Natural Resources Management Plan
- Plan review of new County projects
- Natural Resource Conservation Area land designation
- Rapid Environmental Impact Review (REIR)

Natural Resources Management Plan



AN ELEMENT OF ARLINGTON COUNTY'S
COMPREHENSIVE PLAN
ADOPTED November 13, 2010



19 Primary Recommendations

Recommendation	
1	Adopt a general policy goal of “Zero-Loss” of County-owned natural lands.
2	Establish a new administrative category of County-owned open space, known as Natural Resource Conservation Areas (NRCAs).
3	Develop a new GIS-based environmental review process to protect significant individual natural resources on Arlington County-owned open space from ongoing maintenance activities, redevelopment or new construction on County-owned properties or private properties within 100’ of a designated natural resource feature. Revise current Administrative Regulation 4.4 (Environmental Assessment Process) to incorporate the use of this GIS layer into the review process for all County-initiated land-disturbing activities. Explore expansion of current County review processes to help ensure that land-disturbing activities on private property would not adversely impact documented natural resources on property owned and/or managed by Arlington County Government, Northern Virginia Regional Park Authority, Arlington Public Schools, Northern Virginia Conservation Trust, or any other land trust.
4	Effectively manage Arlington’s natural resources by establishing a single management unit with specialized skills in natural lands preservation and natural resources management.
5	Develop an individual natural resources management plan for each County-owned park designated as a Natural Resource Conservation Area, or containing NRCAs.



Restoration and Habitat Creation

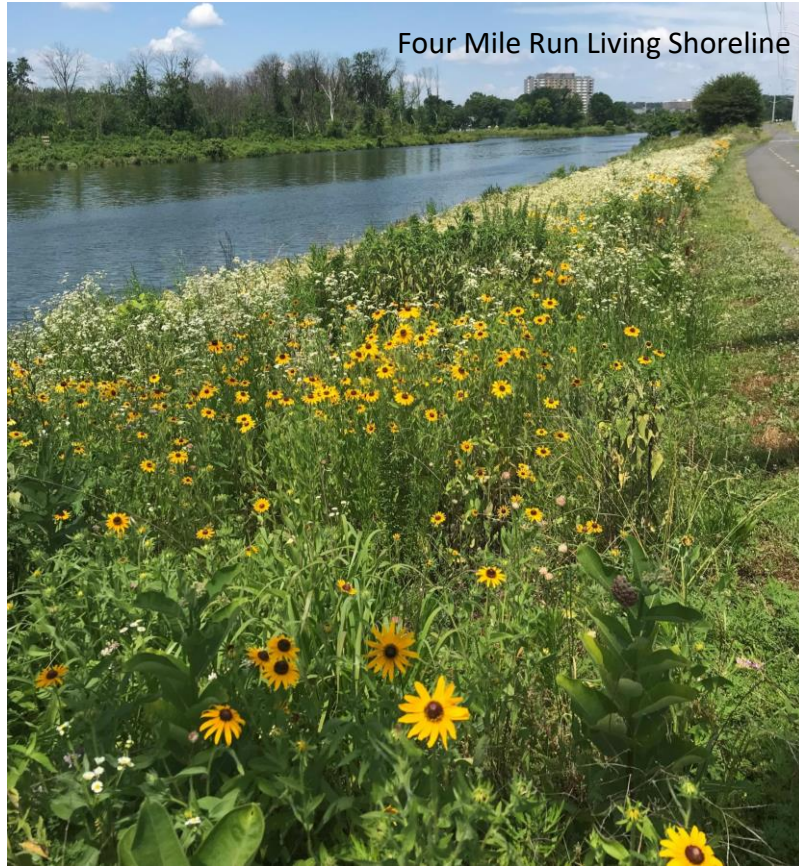
“As a testimony to the historical richness and diversity of native local flora, approximately 28% of the known, naturally occurring species in VA were once found within the boundaries of Arlington County.” NRMP 2010



Dominion Partnership
Pollinator Patch



DPR Digs-In Long Branch
Restoration Planting



Four Mile Run Living Shoreline



W&OD PRISM Planting



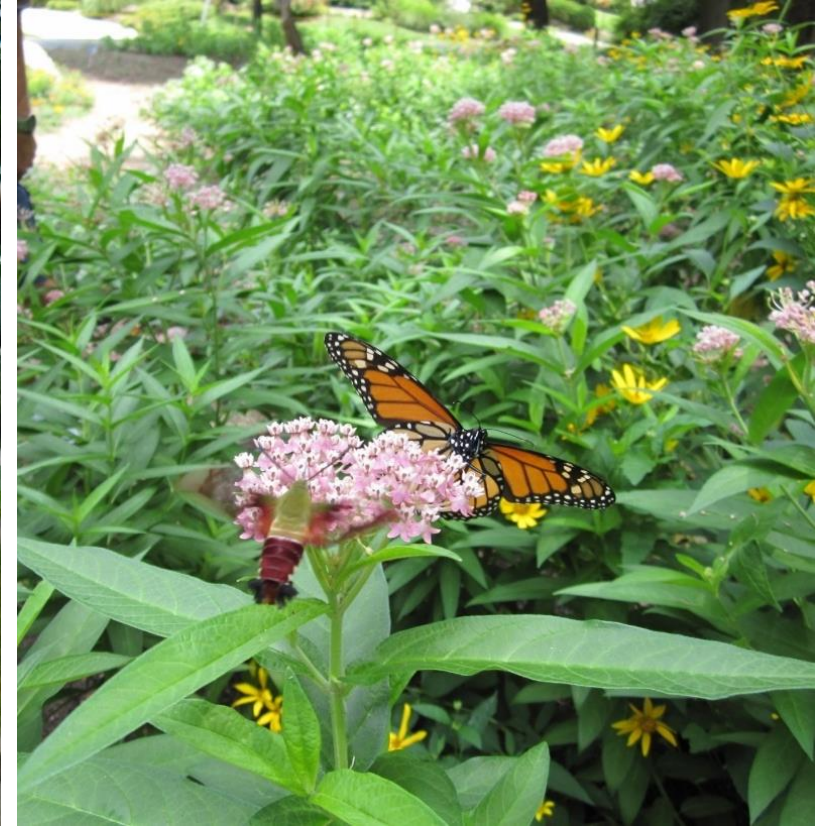
Barcroft Converted
Ballfield Meadow

Meadows, Monarch Way Stations, Pollinator Patches and Living Shorelines



Native Plant Nursery - 7,200 plants propagated by July of 2019





Mayor's Monarch Pledge



Invasive Plant Management

“Invasive plant species represent the greatest and most immediate threat to the continued survival of Arlington’s natural lands and native plant communities.”

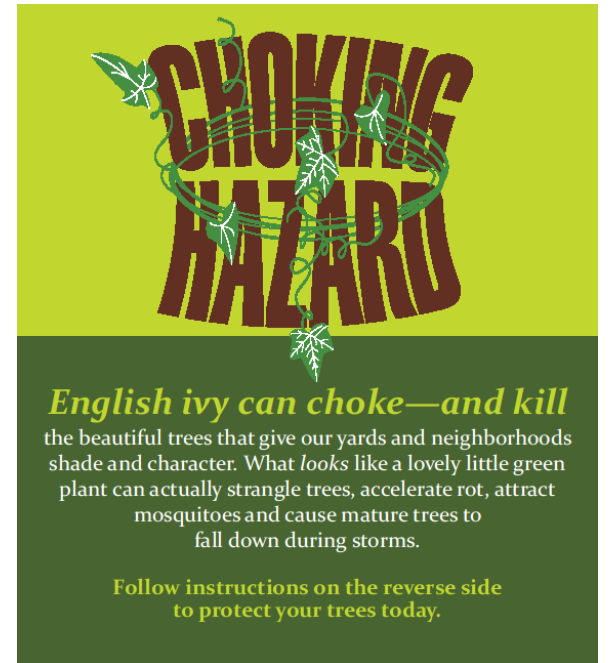


Remove Invasive Plants

Removal/Management (RiP sites, volunteers, contractors, staff, partners).



PRISMs (Partnerships for Regional Invasive Species Management)



Combination of staff, volunteer and contractual services. Mechanical, herbicidal and other methods.

Goal: Protect Arlington’s remaining natural resources.



Temporary vernal pool
built as as an amphibian
breeding pool.



Vernal Pool Amphibians





Engagement



City Nature Challenge 2018: Washington, DC metro area April 27-30

159 cities worldwide participated. As part of Washington, DC, Arlington came in 15th in number of species tallied, 10th in number of observations posted, and 4th in overall citizen participation.



Citizen Science and Stewardship Opportunities

National Moth Week, Christmas Bird Counts, Breeding Bird Surveys, Frog Watch, Fourth of July Butterfly Counts, Cricket Crawl, Feeder Watch, iNaturalist, City Nature Challenge, Bioblitzes

Invasive Plant Removal, Nursery Workdays, Restoration Plantings

City Nature Challenge this year will
be April 30-May 3rd this year!

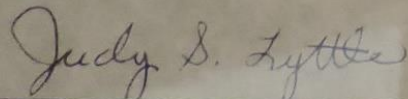
**Virginia Association of Counties
2016 Achievement Award**

for an Innovative County Program
presented to

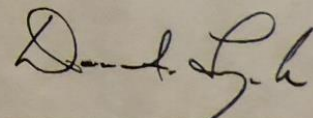
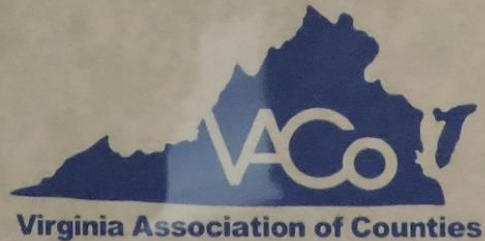
ARLINGTON COUNTY

“Magnolia Bog Restoration Project”

Environmental
November 15, 2016



Judy S. Lyttle
President



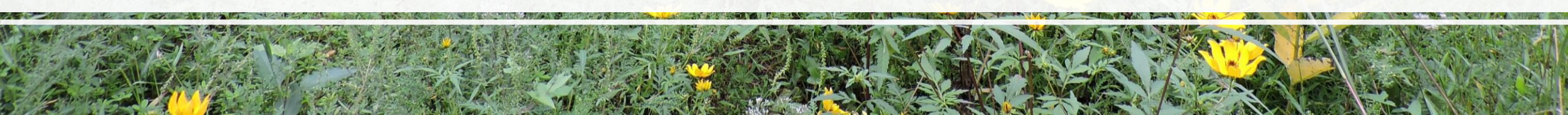
Dean A. Lynch
Executive Director

Barcroft - a Natural Resource Conservation Area

- Globally Rare Magnolia Bog – less than 2 dozen exist in the world
- 18 separate freshwater springs
- 23 plant species are found no where else in Arlington
- 3 dozen other plants species have very limited occurrence and are locally rare
- Several Champion Trees: County Champion Green Ash, County Champion Poison Sumac, and second largest River Birch in Virginia
- Several Significant Trees: Sweetbay Magnolia, Swamp Chestnut, 4 hybrid oaks
- Needham's Skimmer – uncommon dragonfly species is not documented elsewhere in Arlington and is uncommon anywhere
- Gray Fox – locally rare but documented in the park
- Little Wood Satyr – an uncommon butterfly was found to colonize the established meadow area and has not been documented anywhere else in Arlington.
- One of only four sites in Arlington we have found Spotted Salamanders to have laid eggs. Wood Frogs, Spring Peeper Treefrogs, and other amphibians are re-establishing themselves.
- Multiple sightings of American Woodcock, increasingly rare Rusty Blackbirds and other birds, including a County record Yellow-crowned Night-heron. Also Black-crowned Night-heron nesting.



Barcroft restored meadow (formerly a practice field)

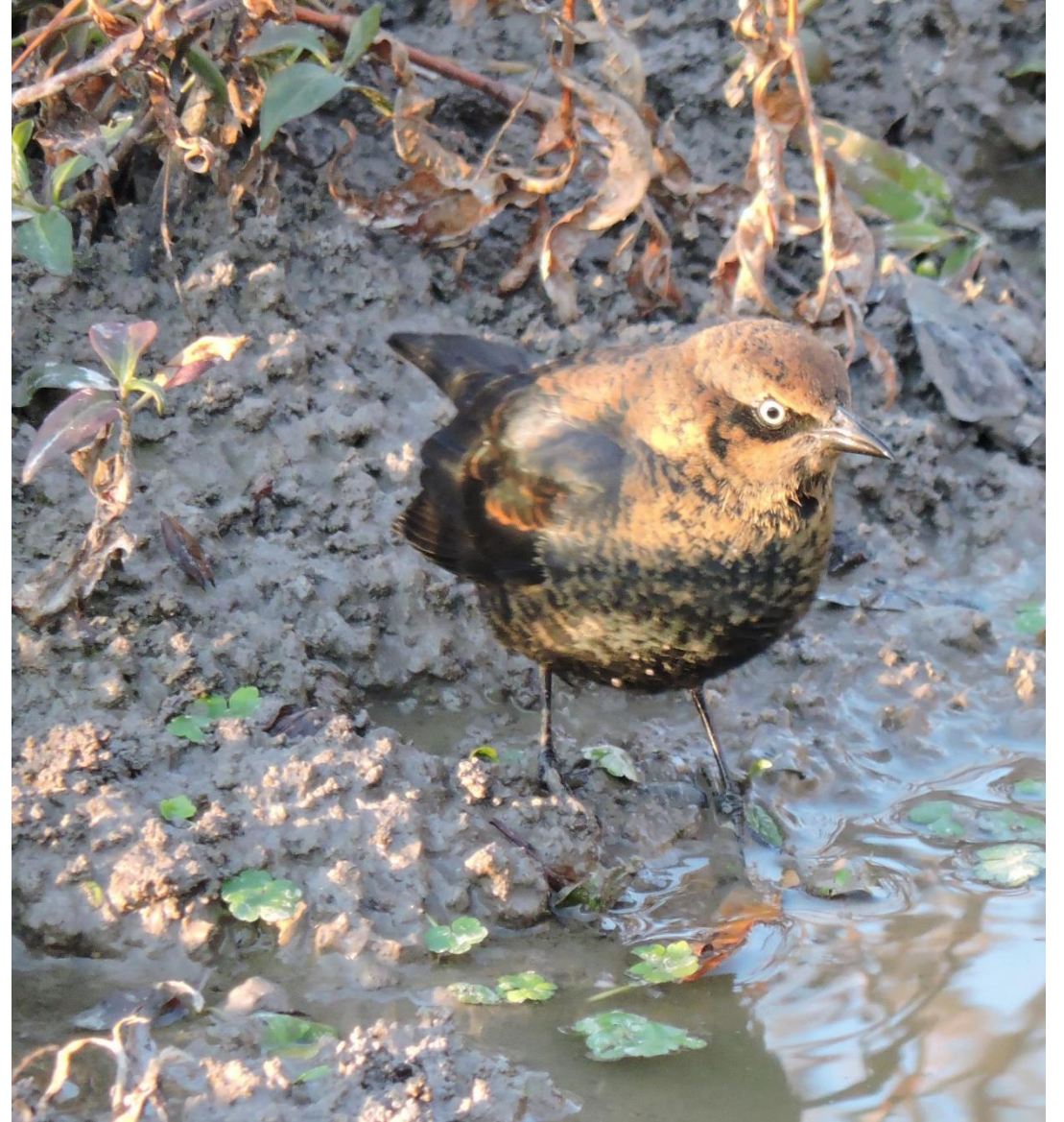


Little Wood
Satyr Butterfly:
A County
record after
native grasses
were planted
at Barcroft
meadow.





Yellow-crowned Night-heron



Rusty Blackbird

Boot's Wood Fern - Recorded in Pimmit Run in 1885



Northern Red
Salamander





Photo courtesy of Luca Catanzaro

White-spotted Slimy Salamander
Not seen since 1977 in Arlington









Photo courtesy of DesignPowers



Mississippi Kites

Common Raven flying over towards Potomac in Arlington





<https://environment.arlingtonva.us/natural-resources/>

The screenshot shows a web browser window displaying the Arlington County website. The address bar shows the URL <https://environment.arlingtonva.us/natural-resources/>. The page features a blue header with the Arlington County logo and navigation links. Below the header is a navigation menu for the Environment section, including links for Streams, Stormwater, Gardens, Trees, Ecology, Energy, Get Involved, and Projects & Plans. The main content area is titled "Ecology & Natural Resources" and includes a large image of volunteers working in a field, a "Quick Links" section with various resource links, and an "Events" section listing a plant removal event on March 6th. At the bottom, there are three sub-sections: "Habitat Restoration", "Native Plants", and "Wildlife", each with a representative image.

COVID-19 Info: Testing, vaccines, FAQs and more. [Learn more](#)

arlingtonva.us County Home • Jobs • Payments • Services A-Z • Translate


Environment

Search our websites

Streams Stormwater Gardens Trees Ecology Energy Get Involved Projects & Plans

Community Gardens Green Gardening Mulch Native Plants

Ecology & Natural Resources



Natural Resources leverages over 1000 volunteer hours annually.

Quick Links


- Ecology & Natural Resources Home
- Forestry and Natural Resources Plan, 2020
- Natural Resources Management Plan, 2010
- Wildlife
- Native Plants
- Invasive Plants
- Volunteer
- Contact

Events


MAR 6 Sat RIP - Haley Park Invasive Plant Removal 9:00 am-11:00 am

[View Calendar](#)


Habitat Restoration



Native Plants



Wildlife



<https://environment.arlingtonva.us/natural-resources/volunteer/>

Volunteer



Proud volunteers pose after a restoration planting at Allie S Freed park.

● ● ● [Play](#)

275 hours by volunteers in the nursery since November.
Over 600 hours volunteered in invasives control.
No restoration planting hours - all due to Covid



Invasive Plant Removal

Removing invasive plants is the first step in habitat restoration! Join up with an ongoing Remove Invasive Plants (RIP) event or [contact us](#) to schedule one for your school, church or business group.

Quick Links

- [Ecology & Natural Resources Home](#)
- [Forestry and Natural Resources Plan, 2020](#)
- [Natural Resources Management Plan, 2010](#)
- [Wildlife](#)
- [Native Plants](#)
- [Invasive Plants](#)
- [Volunteer](#)
- [Contact](#)

Events

- MAR 6 Sat** RIP - Haley Park Invasive Plant Removal
9:00 am-11:00 am
- MAR 13 Sat** RiP - Gulf Branch Invasive Plant Removal
9:30 am-11:30 am
- MAR 20 Sat** RiP - Tuckahoe Park Invasive Plant Removal
10:00 am-12:00 pm
- MAR 21 Sun** RiP - Long Branch Invasive Plant Removal
2:00 pm-4:00 pm
- MAR 24 Wed** RiP - Madison Manor Park Invasive Plant Removal
9:00 am-11:00 am



Capital Naturalist video:

https://www.youtube.com/watch?v=mvTbwH7p_5o

Capital Naturalist

I am in the process of writing a natural history book on being a naturalist in the Washington, DC area. As part of that effort, I have put together some social media under the name of “Capital Naturalist”, which has won the national NAI Interpretive Naturalist Section Thomas Say Award of Excellence.

I invite you to check them out as I make regular local natural history observations using my own photography. Please checkout:

- <http://capitalnaturalist.blogspot.com/>
- Search “Capital Naturalist Group” on Facebook
- Follow me on Twitter: @CapNaturalist
- Check out the Capital Naturalist YouTube Channel

**Contact Info: Alonso Abugattas: Aabugattas@arlingtonva.us
Phone: 703-228-7742**





Periodical Cicadas



They're coming! And in a BIG way! Billions of periodical cicadas will be emerging from mid April to the beginning of June after spending 17 years underground! These are different from the many species of annual cicadas which grace us with their songs each summer. Though each individual annual cicada lives 2-5 years underground before emerging, they're life cycles are staggered so we get some each year. Most annuals emerge after the last of the periodicals have finished reproducing.

Periodical cicadas emerge on prime numbered years, either 13 or 17. The 13 year ones are restricted to the South. There are a couple of theories why this is. One has to do with the ice ages during the Pleistocene Epoch 1.8 million years ago. Summers then were believed to be cyclical, with warmer summers each 13 or 17 years. While underground the temperatures were regulated, the adults emerged on these warmer years. This was a good adaptation as no predators could evolve to take advantage of them emerging so far apart. By all of them emerging in synchronization over a short time period, when ground temperatures reach 64 degrees Fahrenheit in a sustained pattern, usually after a rain, they overwhelm the predators that remain. Through what is called predator satiation, where animals who would eat them are flooded with so many cicadas that they can consume only a small amount, reducing the probability of an individual being eaten, many survive to lay eggs.

The cicadas that emerge together in the same year are collectively called a "Brood" which are labeled with Roman numerals. There were at one time 17 broods in North America, but now some are now extinct. Take for example Brood XI which was last seen in Connecticut in 1954. The ones emerging in the DMV and other parts are parts of Brood X, the Great Eastern Brood. This is one of the larger and most widespread of them. For the first time since 2004,



Why Use Natives?

- They provide more food/shelter for other animals with whom they evolved.
- They are preferred by native wildlife (with whom they evolved).
- They are adapted to our environmental and soil conditions (Right Plant Right Place).
- There are so many to choose from for just about every growing condition (over native 1700 species in NoVA).
- The same plants can have multiple uses.
- They are attractive!
- Given the possibility for insects to lay large number of eggs, supplying what they need can make a big difference locally. 50% of insects eat plants, and up to 90% of these are specialists.



96% of terrestrial birds feed their young caterpillars (and sawflies) as their major food source, particularly while nesting. All our 17 native bats feed on insects, with many preferring moths.

Woody Plants			Perennials		
Plant Genus	Common Name	# of Lepidoptera species supported	Plant Genus	Common Name	# of Lepidoptera species supported
<i>Quercus</i>	oak	534	<i>Aster</i>	asters	112
<i>Salix</i>	willow	455	<i>Solidago</i>	goldenrod	115
<i>Prunus</i>	black cherry	456	<i>Eupatorium</i>	joe pye, boneset	42
<i>Acer</i>	maple	285	<i>Carex</i>	sedges	36
<i>Betula</i>	birch	413	<i>Ipomoea</i>	morning glory	39
<i>Populus</i>	poplar	368	<i>Lupinus</i>	lupine	33
<i>Vaccinium</i>	blueberry	288	<i>Lonicera</i>	honeysuckle	36
<i>Malus</i>	crabapple	311	<i>Viola</i>	violets	29
<i>Ulmus</i>	elm	213	<i>Geranium</i>	geraniums	23
<i>Alnus</i>	alder	165	<i>Rudbeckia</i>	black-eyed susan	17
<i>Carya</i>	hickory	200	<i>Oenothera</i>	evening primrose	16
<i>Tilia</i>	basswood	150	<i>Iris</i>	iris	17
<i>Pinus</i>	pine	203	<i>Asclepias</i>	milkweed	12
<i>Crataegus</i>	hawthorn	159	<i>Penstemon</i>	beardtongue	8
<i>Fraxinus</i>	ash	150	<i>Verbena</i>	verbena	11
<i>Picea</i>	spruce	156	<i>Phlox</i>	phlox	8
<i>Rosa</i>	rose	139	<i>Monarda</i>	bee balm	7
<i>Fagus</i>	beech	126	<i>Veronica</i>	veronica	6
<i>Juglans</i>	walnut	130	<i>Schizachyrium</i>	little bluestem	6
<i>Castanea</i>	chestnut	125	<i>Lobelia</i>	cardinal flower	4
<i>Corylus</i>	filbert	131	<i>Helianthus</i>	sunflowers	73
			<i>Carex</i>	sedges	36

BRINGING NATURE HOME



How Native Plants
Sustain Wildlife
in Our Gardens

DOUGLAS W. TALLAMY

"If you have a backyard, this book is for you."
—Richard Louv, author of *Last Child in the Woods*

Bringing Nature Home

UPDATED AND EXPANDED

How You Can
Sustain Wildlife
with Native Plants

Douglas W. Tallamy

With a Foreword by Rick Darke

"Tallamy is one of the most original and persuasive
present-day authors on conservation."

—EDWARD O. WILSON, University Research
Professor Emeritus, Harvard University

NATURE'S BEST HOPE

A New Approach
to Conservation That
Starts in Your Yard

DOUGLAS W. TALLAMY

bestselling author of *Bringing Nature Home*

The Rich Ecology of Our
Most Essential Native Trees

The Nature of Oaks

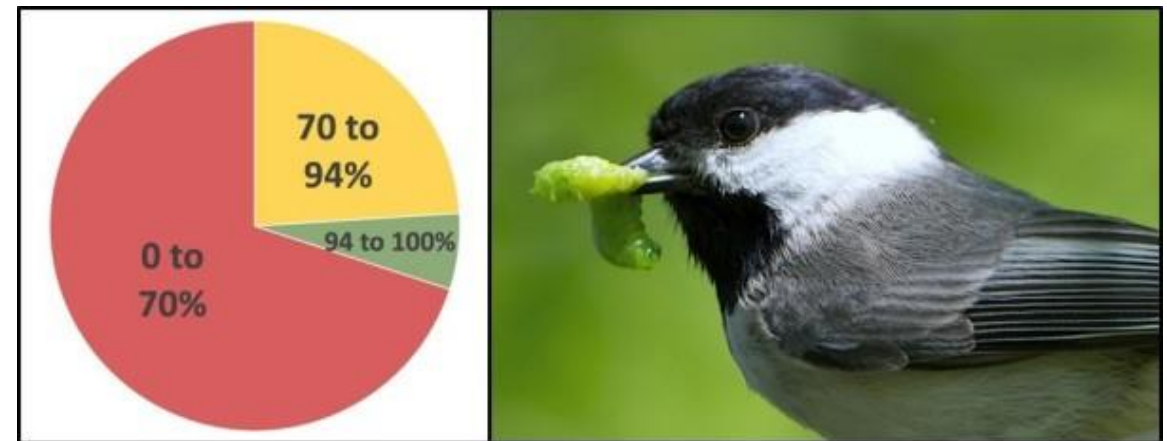
DOUGLAS W. TALLAMY

NEW YORK TIMES BEST-SELLING AUTHOR OF *Nature's Best Hope*

About 9,120 to raise one brood of 3.



70% native biomass is the magic number for chickadees
(90% of food are insects, caterpillars the most preferred)



Less than that means 60% less likely to try and breed, nests have 1.5 fewer eggs and 1.2 fewer fledglings, delayed maturation, & less weight, can't sustain the population.

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Common Nonnative Woody Plants

Genus	Common Name	# Caterpillars Species Supported
Bambusa	Bamboo	1
Buddleja	Butterfly Bush	1
Buxus	Boxwood	1
Forsythia	Forsythia	1
Laburnum	Golden Raintree	1
Lagerstroemia	Crape Myrtle	3
Nandina	Heavenly Bamboo	0
Zelkova	Zelkova	0

Common Nonnative Perennials

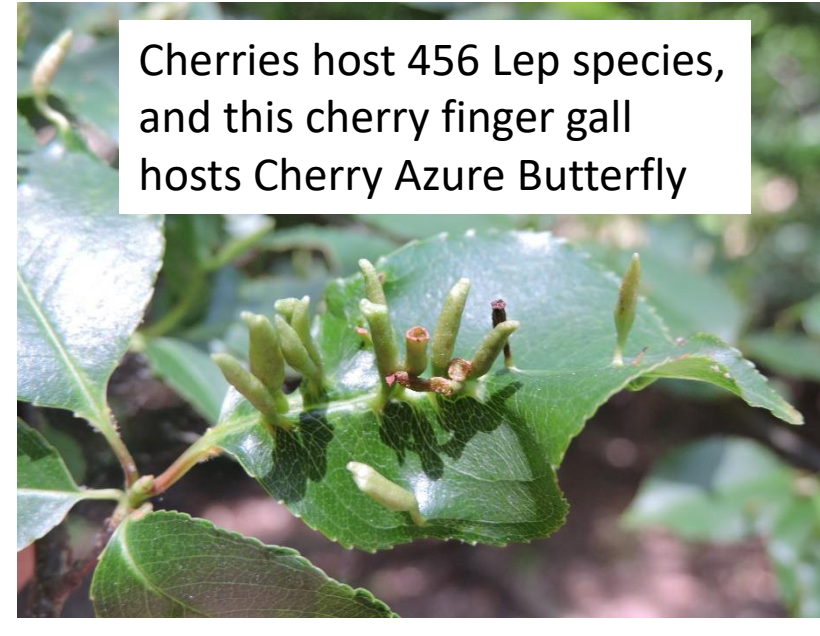
Genus	Common Name	# Caterpillar Species Supported
Calceolaria	Chinese Aster	2
Hemerocallis	Daylilies	0
Hosta	Hosta	0
Hyacinthus	Hyacinth	1
Liriope	Lilyturf	0
Muscari	Grape Hyacinth	0
Narcissus	Daffodils	1
Ornithogalum	Star of Bethlehem	0
Petunia	Petunias	3
Tagetes	Marigolds	4 (1 nonnative)
Tulipa	Tulips	0
Zoysia	Korean Lawn Grass	1



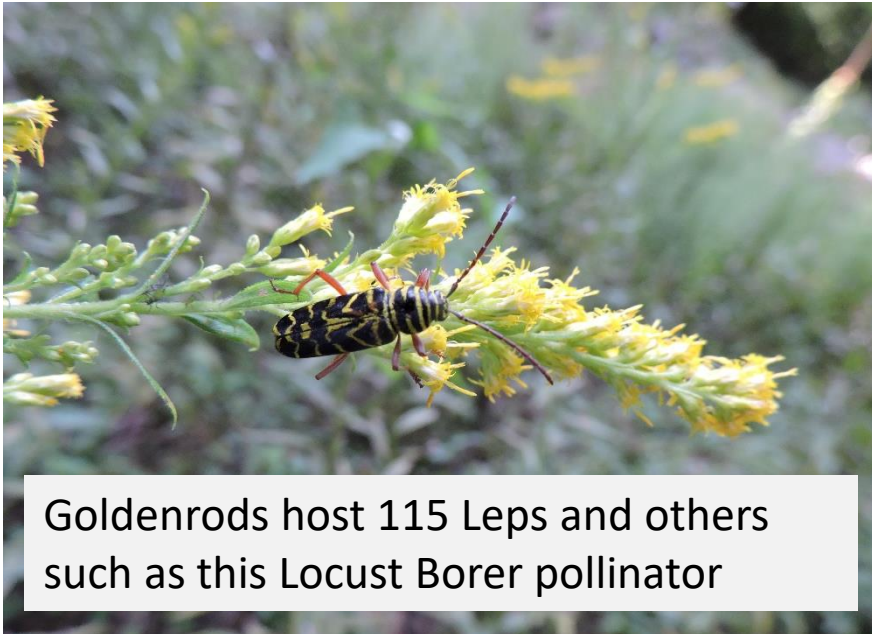
455 Leps, but also others like this Willow Sawfly



Asters host 112 Lep species, such as this Pearl Checkerspot.



Cherries host 456 Lep species, and this cherry finger gall hosts Cherry Azure Butterfly



Goldenrods host 115 Leps and others such as this Locust Borer pollinator

Keystone Plants – 5% of plant genera hosted 70-75% of local Lepidoptera species.

Staples in what Tallamy calls building your Homegrown National Park

The Mighty Oak - over 600 species rely solely on it

40+
Mammal
species

60+ Birds
species

61 Wood
Boring
Beetle
species

21
Leafhopper
species



Post Oak

550+ Cynipid
Gall Wasp
species

557
caterpillar
species

37
Treehopper
species